A WAVE OF DARKNESS.

At Pittsburg, Pa., between 10 and 11 a. m., November 9, during a storm of rain and wind a period of great darkness occurred. The shade came up the Ohio Valley from the northwest like the shadow of an eclipse. It seemed to be produced by an area of low sweeping clouds broad enough to cover the heavens and dense enough to cut off all light from above. Business was suspended and the streets were filled with people looking upward anxiously. When the darkness was at its height the sudden dawning of a spot of silver brightness, low down on the horizon, over the Ohio brought relief. This was the rear guard of the darkness and beneath the bright spot its reflection in the river appeared like molten silver. Three such waves of darkness and light are said to have occurred successively, each one taking but a few minutes to pass.

[NOTE.—The weather map of November 9 shows that a cold wave was at this time about to pass over western Pennsylvania, and that the advancing front of a belt of cloud and rain was at this time a little to the northwest of Pittsburg and moving southward. Such a belt is usually marked by a series of several long parallel clouds, representing either the crests of great atmospheric waves or the tops of great atmospheric breakers, similar to those of the ocean surf or to the tidal bore that advances up the coast of converging inlets and river deltas. The observer at Pittsburg seems to have caught a series of observations beneath these successive wave clouds as they rolled over the city of Pittsburg. The depth or thickness of such a cloud is approximately indicated by the darkness beneath it and as the heaviest thunder clouds, hail clouds, and tornado clouds produce similar degrees of darkness it is fair to presume that the clouds at Pittsburg were as deep as those. The local topography greatly affects the style, the thickness, and the motion of the clouds, and it may be rare to observe three such clouds as occured at Pittsburg in succession, but it is a very common phenomenon to notice the great darkness that occurs whenever any heavy cloud, especially those with hail and rain pass over a station. Several similar waves but much thinner and at much greater distances apart are commonly observed at Washington whenever a northwest wind breaks over the Appalachian Mountains, and runs under the air of the Atlantic Slope. The distance apart of such crests in time and in miles should be determined whenever possible.]

LONG-RANGE FORECASTS IN OREGON.

The following extract from the weather synopsis and general forecast by Mr. B. S. Pague, Local Forecast Official at Portland, Oreg., was published on his morning weather map for November 12, 1895.

The first winter storm of the season is shown on the map this morning. The conditions, as shown, are those peculiar to the winter season and represent the passage of the dry season and the appearance of the wet season. On April 20 last, the first type of summer, dry conditions appeared. It was then stated that from this date, April 20, the rain would be light and of a local, more than a general, nature. The conditions from April 20 to date show how well the remarks then made were verified. The phenomenal dry season, which has prevailed over the Pacific northwest for the past six weeks, was due to the storm areas passing from the north, east of the Rocky Mountains, to the southeast toward the Great Lakes; usually, the storm areas have this movement during the months from June to the middle of September, when they assume their winter course, and move southward along the coast line striking land about Vancouver Island, then moving eastward, or at times move in other directions. The period of dry weather is now over; it is probable that short periods of fair weather may prevail, but it is not probable that any extended period of fair weather will again prevail until next spring. Since April 20th last the conditions were more in favor of dry weather than of wet weather, from now on the reverse of this will be true.

The precipitation over the Pacific northwest, since January 1, has been about 30 per cent deficient, and it is reasonable to assume that for the remainder of the year there will be an excess.

[NOTE.—The importance of long-range predictions, especially when based upon a broad study of atmospheric conditions over the whole globe, cannot be overestimated. The changes in the course of storm tracks may be spoken of as either the cause or the concomitant of changes in the weather and climate. In a narrow sense they are the cause, but in a broader sense they may often be considered as simply accompanying or correlated phenomena. The weather on the immediate coast of Oregon and Washington depends so largely upon what is called the general circulation of the atmosphere over the North and South Pacific oceans that it may be reasonably hoped that the study of this latter subject will elucidate the matter and render these seasonal forecasts highly accurate and satisfactory.]

OBSERVATIONS AT HONOLULU.

Meteorological observations at Honolulu, Republic of Hawaii, by Curtis J. Lyons, Meteorologist to the Government Survey.

Pressure is corrected for temperature and reduced to sea level, but the gravity correction, —0.06, is still to be applied.

The absolute humidity is expressed in grains of water, per cubic foot, and is the average of four observations daily.

The average direction and force of the wind and the average cloudiness for the whole day are given unless they have varied more than usual, in which case the extremes are given. The scale of wind force is 0 to 10.

The rainfall for twenty-four hours is given as measured at 6 a. m. on the respective dates.

October, 1895.	Pressure at sea level.			Temperature.					Humidity.			Wind.		Cloudiness.	Rain measured at 6 a. m.
									Relative.						
	9 a. m.	3 p. m.	9 p. m.	6 a. m.	2 p. m.	9 p. m.	Maximum.	Minimum.	9 a. m.	9 p. m.	Absolute.	Direction.	Force.		
	Ins.	*Ins.*	*Ins.*	°	°	°	°	°	%	%					*Ins.*
1 ..	30.02	29.93	30.01	70	82	73	83	70	68	81	7.2	ne.	2	2	0.00
2 ..	30.04	30.00	30.08	73	82	74	84	71	64	85	7.8	e-s-n.	1	3	0.00
3 ..	30.09	30.01	30.07	73	84	78	84	72	75	71	8.0	ene.	2	4	0.09
4 ..	30.04	29.93	30.02	74	82	76	84	70	64	70	7.1	une.	4-1	2	0.00
5 ..	30.01	29.94	30.02	69	81	76	83	68	68	70	7.0	ne.	2	3	0.00
6 ..	30.05	29.97	30.06	73	82	74	83	71	64	78	7.0	ne-n.	2	2	0.00
7 ..	30.08	30.01	30.08	75	81	74	82	71	69	80	7.2	nne.	3	4	0.00
8 ..	30.00	30.00	30.07	75	81	76	83	73	66	70	6.9	ne.	3	4	0.07
9 ..	30.05	29.97	30.05	74	80	77	83	72	64	65	6.7	ne.	4	3	0.04
10 ..	30.04	29.97	30.04	75	82	75	82	73	67	70	6.9	ene.	3	4	0.01
11 ..	30.05	29.96	30.02	75	82	76	83	75	61	66	6.3	ne.	3	1	0.03
12 ..	29.98	29.89	29.94	67	79	70	80	66	64	80	6.8	n-s-e.	2	7	0.13
13 ..	29.90	29.80	29.90	66	80	72	81	66	70	80	7.0	w-s	2	0-3	0.06
14 ..	29.94	29.87	29.95	70	81	72	83	67	70	80	7.0	n.	1	0-3	0.00
15 ..	30.00	29.92	29.99	68	82	77	83	66	68	72	7.0	ne.	3	1	0.00
16 ..	30.02	29.93	30.02	70	86	78	87	70	75	79	8.2	n-s.	1	3-6	0.00
17 ..	30.02	29.97	30.04	73	83	75	86	72	75	89	8.4	s.	2	3-7	0.00
18 ..	30.04	29.95	30.00	73	82	78	86	73	70	75	7.9	n.	3	8	0.03
19 ..	30.00	29.92	29.97	72	83	75	86	71	72	86	8.1	s.	2	4	0.01
20 ..	29.97	29.90	29.97	74	84	75	85	71	72	81	7.9	s.	2	10-3	0.00
21 ..	29.94	29.87	29.93	71	82	73	85	71	75	85	7.7	s.	2	8-4	0.00
22 ..	29.94	30.90	29.98	72	79	72	85	71	75	90	8.1	s.	1	1-6	0.00
23 ..	30.03	29.96	30.05	68	84	73	86	68	75	85	7.8	e-s.	1	3	0.27
24 ..	30.08	30.00	30.05	75	82	78	84	70	68	78	7.7	nne.	3	4	0.00
25 ..	30.06	29.95	30.02	75	79	77	82	74	75	77	8.0	nne.	3	5	0.00
26 ..	29.98	29.89	29.98	75	81	77	83	73	78	76	7.8	ene.	3	3	0.20
27 ..	30.02	29.93	30.01	70	81	77	82	70	72	76	7.8	ne.	1-3	4-2	0.15
28 ..	30.06	29.96	30.03	72	80	75	82	72	85	70	7.6	nne.	4	8-2	0.16
29 ..	30.06	30.00	30.08	73	78	77	82	69	73	71	7.4	nne.	3	7	0.05
30 ..	30.09	30.01	30.06	73	81	77	83	73	69	71	7.1	ne.	4	3	0.07
31 ..	30.08	29.99	30.07	76	81	77	83	76	60	75	6.9	ne.	3-5	5	0.01
	30.01	29.94	30.02	72.2	81.5	75.3	83.5	70.8	69.1	76.7	7.4	.....	.....	.....	1.38

The monthly summary for October is: Mean temperature, 6+2+9÷3 was 76.3; the normal is 76.5; extreme temperatures, 87° and 66°.

Relative humidity 3 per cent above normal.

DO THUNDERSTORMS MOVE AGAINST THE WIND?

In a letter of February 10, 1896, Mr. G. W. Richards, Voluntary Observer, Maple Plain, Minn., says:

From my observations of several years in this section, I find that our heaviest storms move from the southwest, west-southwest or west, and are accompanied, or at least preceded, by surface winds ranging from southeast, east or northeast, and that there is a greater likelihood of a storm passing over this region if the wind direction makes an angle of from 135° to 180° with the direction of motion of the rain cloud than if it makes an angle of only 90° or quarter-wise. With the wind from the south, or quarter-wise, there seems to be a greater tendency of the showers to pass around to the northward. It seems that with east winds and with showers advancing from the west or southwest we are more in the line of the showers' path than if the wind were coming from a more southerly direction. If the shower is of great intensity it frequently happens that the east wind will subside about the time when